



VIA EMAIL AND OVERNIGHT MAIL

March 11, 2016

Mr. David Albright  
Manager, Drinking Water Protection Section  
United States Environmental Protection Agency  
Region IX  
75 Hawthorne Street  
San Francisco, CA 94105-3901

Re: Notice of Deficiency (NOD)  
Underground Injection Control (UIC) Area Permit Application  
Class III, R9UIC-AZ1-FY16-1  
Gunnison Copper Project  
Cochise County, Arizona

Dear Mr. Albright:

Excelsior Mining Arizona, Inc. (Excelsior) is in receipt of your March 4, 2016 correspondence regarding Excelsior's Underground Injection Control (UIC) Area Permit Application (Application). Attached to this correspondence you will find Excelsior's responses to each of your comments to the Application. In addition, mailed with this letter and response to comments are disks which contain the Application revised as noted in the attached responses. Further, mailed with this letter are revised pages and instructions to easily remove and replace those portions of the original application which are revised by the attached responses. For ease of your reference, the first attachment behind this letter is a table that provides a listing of replacement pages for the Application Notebook.

Given that we did not have the opportunity to meet with Michele during our pre-application meeting, we would like to bring our technical team to discuss the project, the application, and any questions you may have. We may all find it useful to discuss the application face-to-face. We look forward to

arranging such a meeting with you in the very near future. Should you have any questions regarding these responses, please do not hesitate to call me.

Yours truly,

**EXCELSIOR MINING ARIZONA, INC.**

A handwritten signature in black ink, appearing to read 'Rebecca A. Sawyer', written in a cursive style.

Rebecca A. Sawyer  
Vice President, Sustainability

cc: Marcy Mullins (Environmental Program Specialist, ADEQ) (Via Email)  
Wael Hassinan (ADEQ) (Via Email)  
Michele Dermer (EPA) (Via Email)

### Instructions for Replacing Revised Application Sections

| Item   | Insert Pages                                   | Remove pages                     |
|--|--|----------------------------------|
| 1--List of land-owners within 1/4 mile                   | Table B-2 after Table B-1                      | none                             |
| " "  | Figure B-4 after Figure B-3                    | none                             |
| " "  | Revised Attachment B pages i-2                 | Attachment B pages i-2           |
| 2--Submittal of Application to other Regulatory agencies | --   | --                               |
| 3--Considerations under Federal Law                      | --   | --                               |
| 4--Attachment B, Table B-1                               | Revised Table B-1                              | Table B-1--all pages             |
| 5--Attachment C, Figure C-1                              | Revised Figure C-1                             | Figure C-1                       |
| 6--Attachment I  | Revised Attachment I text                      | Original Attachment I Pages i-9  |
| 7a--Attachment Q2  | Four (4) 7520-14 Forms at end of Attachment Q2 | none                             |
| 7b--Attachment Q1  | Revised Attachment Q1 text pages i-6           | Original Attachment Q1 Pages i-6 |
| 8--Necessary Resources                                   | --   | --                               |
| 9--Attachment S Aquifer Exemption                        | Revised Attachment S1 text pages i-8           | Original Attachment S1 Pages i-8 |

## Responses by Excelsior

(1) **List of land-owners within  $\frac{1}{4}$  mile of the facility**

40 CFR §144.31 (e) (9) requires a list of names and addresses for all land owners within  $\frac{1}{4}$  mile of the facility property unless EPA determines the requirement is impracticable. The application did not include such a list. **Please provide this list or explain why it is not included.**

**Response:**

*Please see Table B -2 for a list of names and addresses for all landowners within  $\frac{1}{4}$  mile. Locations of the properties are shown on Figure B-4.*

(2) **Submittal of Permit Application to other Regulatory Agencies, And Submittal of Aquifer Protection Permit (APP) Application**

The permit application transmittal letter indicates that EPA was the only recipient. We request you provide the same information to the appropriate State of Arizona regulatory agencies, specifically the Department of Environmental Quality ADEQ). It would also be helpful to EPA to receive a copy of the APP Application submitted to ADEQ. **Please provide documentation that the application was submitted (electronic copies on disk are usually acceptable) to the appropriate regulatory agencies in Arizona. Please also provide the names of the officer of each agency with whom you will communicate through the duration of this permit determination process, and their contact information. Also, please provide EPA with the APP application as submitted to ADEQ.**

**Response:**

*Excelsior provided copies of the UIC application to Marcy Mullins of ADEQ on February 4, 2016. Ms. Mullins is ADEQ's project manager for the Aquifer Protection Permit application and the primary contact for the Gunnison Copper Project. The UIC application has not been provided to any other agencies in Arizona. Attached to this letter, please find a copy of the ADEQ stamped UIC documenting ADEQ's receipt of same. A disk copy of the Aquifer Protection Permit application is enclosed.*

(3) **Considerations of Federal Law**

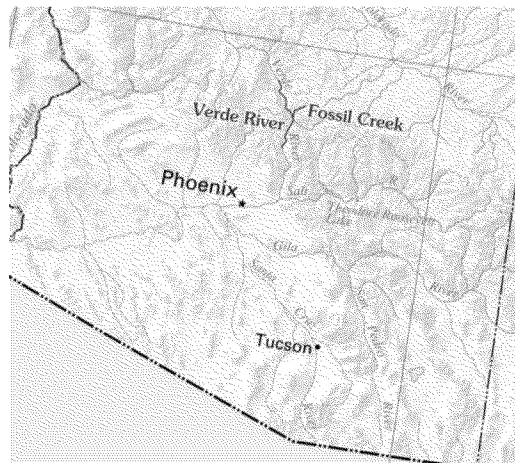
40 CFR §144.4 requires that EPA consider the potential applicability of several specific Federal Laws (the Wild and Scenic Rivers Act (WSRA), National Historic Preservation Act (NHPA), Endangered Species Act (ESA), Coastal Zone Management Act (CZMA), and the Fish and Wildlife Conservation Act (FWCA). **To expedite our consideration of these laws, we request that you describe how you will satisfy applicable requirements under those Federal Laws.**

**Response:**

***a) Wild and Scenic Rivers Act 16 U.S.C. 1273***

*Section 7 of the Wild and Scenic Rivers Act prohibits the EPA from assisting by license or otherwise the construction of any water resources project that would have a direct, adverse effect on the values for which a national wild and scenic river was established. 40 C.F.R. § 144.4(a).*

*Arizona has 57.3 miles of river that are designated under the Wild and Scenic Rivers Act —16.8 miles of Fossil Creek, and 40.5 miles of the Verde River.<sup>1</sup> As shown on the map below, neither of the designated sections of river are proximate to the Gunnison Copper Project site (which is located approximately 50 miles east of Tucson), or the permit area therein.*



*Because the two designated sections of river are substantially geographically removed from the permit area, any activities in the permit area that might constitute a “water resources project” within the meaning of the statute cannot have a “direct adverse effect on the values” for which the two Wild and Scenic Rivers were established. As a result, the project does not implicate the Wild and Scenic Rivers Act.*

<sup>1</sup> <http://www.rivers.gov/arizona.php>

***b) The National Historic Preservation Act of 1966 16 U.S.C. 470***

*Section 106 of the National Historic Preservation Act (“NHPA”) and its implementing regulations (36 C.F.R. § 800) require the EPA, before issuing a license, to adopt measures when feasible to mitigate potential adverse effects of the licensed activity and properties listed or eligible for listing in the National Register of Historic Places. 40 C.F.R. § 144.4(b). The Act's requirements are to be implemented in cooperation with State Historic Preservation Officers and upon notice to, and when appropriate, in consultation with the Advisory Council on Historic Preservation. Id.*

*Under 36 C.F.R. § 800.3(a), the EPA must make an initial determination as to whether the proposed activity “has the potential to cause effects on historic properties.” “If the undertaking is a type of activity that does not have the potential to cause effects on historic properties, assuming such historic properties were present, the agency official has no further obligations” under Section 106 of NHPA or its implementing regulations. Id.*

*Excelsior is in the possession of studies of the Gunnison project area and its surroundings examining what archeological resources might be present. Together, the studies show that no cultural resource sites are present within the project boundary, which includes the proposed permitted area (Area of Review). Specifically, an archeological survey was conducted by Professional Archeological Services of Tucson in 2010.<sup>2</sup> No historic properties or potential historic properties were identified in the permit area. Further archeological studies for areas covered by infrastructure such as the proposed SX-EW plant, evaporation ponds, sulfuric acid plant and railway facilities associated with the project site were completed by WestLand Resources Inc. in 2014.<sup>3</sup> These studies also did not identify any historic properties or potential historic properties within the permit area. Because there are no historic resources in the permit area, there is no potential for the project to cause adverse effects on any historic properties.*

***c) The Endangered Species Act 16 U.S.C. 1531***

*Section 7 of the Endangered Species Act (“ESA”) and its implementing regulations (50 CFR part 402) require EPA to ensure, in consultation with the Secretary of the Interior or Commerce, that any action authorized by EPA is not likely to jeopardize the continued existence of any endangered or threatened species or adversely affect its critical habitat. 40 C.F.R. § 144.4(c).*

*Excelsior has commissioned a threatened and endangered species survey<sup>4</sup> of the Gunnison project area, which states that no threatened or endangered species have been detected within or adjacent to*

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<sup>2</sup> P.A.S.T. Cultural Resources Report No. 101981, Professional Archeological Services of Tucson, 2010, Archeological Survey of the Thing View Project near Dagoon, Cochise County, AZ. : Internal Excelsior Mining Corp. report, 15p; P.A.S.T. Cultural Resources Report No. 101974, Professional Archeological Services of Tucson, 2010, Archeological Survey of the North Dagoon Basin Project near Dagoon, Cochise County, AZ. : Internal Excelsior Mining Corp. report, 16p.

<sup>3</sup> Cultural Resources Report 2014 -52A, Westland Resources Inc., 2014, A Cultural Resource Inventory of 256 Acres near Dagoon, Cochise County, Arizona, : Internal Excelsior Mining Corp. report, 53p.

<sup>4</sup> Darling Environmental and Surveying, Ltd., 2015, Gunnison Project 2014 State Land Threatened and endangered Species Analysis: Internal Excelsior Mining Corp. report, 9 p.

*the project boundary. The study, which is updated yearly, documents the potential occurrence of federally listed species and their designated or proposed critical habitat. The most recent update in 2015 explains that:*

*During the July 2015 site visit as well as past site visits since 2011, no threatened or endangered species have been detected within or adjacent to the Analysis Area. Based on US FWS and AGFD records, field observations and a habitat analysis, there is extremely low to no potential for occurrence of any of the special -status species protected under the ESA within or adjacent to the Analysis Area.*

*As a result, Excelsior does not believe that the Gunnison Project is likely to jeopardize the continued existence of any endangered or threatened species, or adversely affect any critical habitat. Excelsior has been in contact with Arizona Game and Fish regarding the project. Excelsior will continue to coordinate with Arizona Game and Fish throughout the course of the project.*

***d) The Coastal Zone Management Act 16 U.S.C. 1451***

*Section 307(c) of the Coastal Zone Management Act and its implementing regulations (15 CFR part 930) prohibit EPA from issuing a permit for an activity affecting land or water use in the coastal zone until the applicant certifies that the proposed activity complies with the State Coastal Zone Management program. 40 C.F.R. § 144.4(d).*

*Arizona has no coastal zones. The term "coastal zone" means the coastal waters (including the lands therein and thereunder) and the adjacent shorelands (including the waters therein and thereunder), strongly influenced by each other and in proximity to the shorelines of the several coastal states, and includes islands, transitional and intertidal areas, salt marshes, wetlands, and beaches. 16 U.S.C. § 1453(1). The term "coastal state" means a state of the United States in, or bordering on, the Atlantic, Pacific, or Arctic Ocean, the Gulf of Mexico, Long Island Sound, or one or more of the Great Lakes, as well as Puerto Rico, the Virgin Islands, Guam, the Commonwealth of the Northern Mariana Islands, and the Trust Territories of the Pacific Islands, and American Samoa. 16 U.S.C. § 1453(4). Arizona is not a coastal state, and thus cannot have any coastal zones. With - no potential for coastal zones to be impacted, EPA does not need to require a certification and does not need to consult under the Coastal Zone Management Act.*

***e) The Fish and Wildlife Coordination Act 16 U.S.C. 661***

*The Fish and Wildlife Coordination Act requires EPA, before issuing a permit proposing or authorizing the impoundment (with certain exemptions), diversion, or other control or modification of any body of water, consult with the appropriate state agency exercising jurisdiction over wildlife resources to conserve these resources. 40 C.F.R. § 144.4(e).*

*To the extent that Excelsior's operations in the project boundary trigger the Act's requirements,<sup>5</sup> EPA may need to consult under the Act. Based on the threatened and endangered species studies discussed above, however, Excelsior does not believe that its operations will have significant impacts on fish or wildlife resources in the permit area.*

**(4) Attachment B, Table B-1**

Under the "Well Type" column, there are some wells designated as "Exempt" and "Non - Exempt". **Please provide an explanation of this designation.**

**Response:**

*The terms "exempt" and "non -exempt" are derived from Arizona Revised Statute Title 45 Chapter 2 which constitutes the State's groundwater rules. Exempt wells are defined therein as wells installed for non -irrigation purposes with pump capacities less than 35 gallons per minute. Exempt wells are generally domestic water and stock wells. The wells are exempt because of their limited withdrawal and small number of users.*

*The pertinent statute regarding exempt wells can be viewed at this link:*

*<http://www.azleg.state.az.us/FormatDocument.asp?inDoc=/ars/45/00454.htm&Title=45&DocType=ARS>*

*Non-exempt wells are defined as wells with a pump capacity in excess of 35 gpm or greater and which do not meet the exemption criteria in Section 45-454.*

*A footnote has been added to Table B-1 explaining the usage of this terminology.*

**(5) Attachment C, Figure C-1**

The same symbol is used to represent "Exempt" or "Non -Exempt" wells. This is confusing especially since there is only one well marked. **Please clarify if the marked well is either Exempt or Non -Exempt, and please refer to Comment (4) above regarding the distinction.**

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<sup>5</sup> It is likely that Excelsior's activities do not come within the scope of activities covered under the Fish and Wildlife Coordination Act. The Act's consultation requirement applies "whenever the waters of any stream or other body of water are proposed or authorized to be impounded, diverted, the channel deepened, or the stream or other body of water otherwise controlled or modified for any purpose whatever, including navigation and drainage." 16 U.S.C.A. § 662 (emphasis added). "Body of water" is not defined in the law. Excelsior's activities, therefore, would only be implicated if "body of water" is construed to include groundwater as well as traditional surface bodies of water.



**Response:**

*Figure C -1 has been revised and an explanation of the “exempt” and “non-exempt” terminology was added to the figure.*

*The revised figure shows one non-exempt well and no exempt wells. Exploration and monitor wells are neither exempt nor non-exempt.*

**(6) Attachment I, Formation Testing Program**

Attachment I -1, Section 4.5, Groundwater Quality in the Vicinity of the Project, Page 8, second paragraph - the last sentence refers to this document as the APP. **Please revise.**

**Response:**

*Revision made as requested.*

**(7) Attachment Q, Plugging and Abandonment Plan**

- a) Section 2.2, Page 3, states that an example USEPA Form 7520 -14 is included in Attachment Q-2, however it is missing. **Please provide the 7250-14 as required.**
- b) The last sentence states that plugging and abandonment will not start until authorization is issued to the drilling contractor by ADWR. EPA will also be involved in the approval and authorization of plugging and abandonment, and will coordinate directly with the permittee. **Please revise.**

**Response:**

- a) *Forms 7250 -14 are provided for observation wells, hydraulic control wells, and injection/recovery wells.*
- b) *Revision made as requested.*

**(8) Attachment R, Necessary Resources**

- a) For planning purposes, a surety bond may be an acceptable instrument for financial assurance. Please note that the amount of the bond must be sufficient for EPA to secure the services of a third party to complete all closure activities and thus the required amount may be significantly higher than the applicant's estimated costs.
- b) The cost estimates are presented in a phased approach to correlate with a phased program—construction, operation, maintenance, and finally closure. Post-closure costs are included in

the closure cost estimate. Please note it will be necessary for financial assurance to cover an activity or phase before it is authorized to begin, as well as any subsequent activity. For example, following the construction phase, before authorization to inject is provided, financial assurance must be in place to cover operation, maintenance and post closure monitoring.

**Response:**

*Excelsior acknowledges the comment and appreciates the further direction regarding closure cost estimates and financial assurance.*

**(9) Attachment S, Aquifer Exemptions**

An aquifer exemption (AE) application is included within this UIC application. In order to be approved, an AE application must meet all the requirements set out in 40 CFR Part 146.4. Our brief review of the material provided indicates that it may be lacking sufficient detail to demonstrate that the application meets these requirements. In addition, you may refer to the July 2014 memorandum prepared by EPA regarding aquifer exemptions; a copy is enclosed for your information and use. Please note, not all elements of the memorandum may be applicable for Class III solution mining, but it may be useful in the preparation of your application. **Please ensure the AE application meets all the applicable requirements of EPA's regulations in 40 CFR 146.4.**

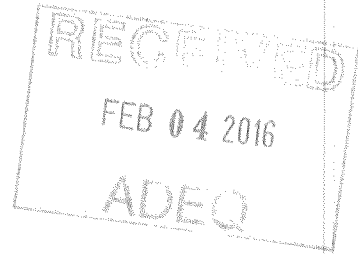
**Response:**

*It is not clear what detail may be lacking sufficient detail from this comment. We have added text describing the "commercially producible" nature of the deposit to Section 2.2.*



February 2, 2016

Nancy J. Rumrill  
Environmental Protection Agency  
WTR-3-2 75 Hawthorne Street  
San Francisco, California 94105



**Re: Gunnison Copper Project  
Underground Injection Control Permit Application**

Ms. Rumrill:

Excelsior Mining Arizona, Inc. has prepared this application in support of a Class III UIC permit for the Gunnison Copper Project in Cochise County, Arizona. We met with you and UIC group on July 22, 2015 for the pre-application meeting. We submitted the corresponding Aquifer Protection Permit (APP) application to the Arizona Department of Environmental Quality (ADEQ) on January 13, 2016. The APP application was found to be administratively complete on that date and is now in technical review.

We look forward to working with you and the ADEQ on this permit. Please contact us with any questions or comments.

Sincerely,

A handwritten signature in black ink, appearing to read "Rebecca A. Sawyer".

Rebecca A. Sawyer  
Vice President, Sustainability  
**EXCELSIOR MINING ARIZONA, INC.**  
Direct: 602-559-5583  
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